

Date: Thursday, 5/3/2007 11:24:35 AM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : 350/355 AS X-TUBE FWD UNDER REVIEW
Job Number : 32155	
Estimate Number : 12485	
P.O. Number :	Part Number : D350748101
This Issue : 5/3/2007 S.O. No. :	Drawing Name : UNDER REVIEW
Prsht Rev. : NC	Project : N/A
First Issue : 1/1 Type : LANDING GEAR	Drawing Revision : N/A
Previous Run : 32154	Material :
Written By :	Due Date : 6/10/2007 Qty: 1 Um: Each
Checked & Approved By : <u>07.05.03</u>	
Comment : Est Rev: A New Issue 06-07-14	
Est Rev: B Update qty of MS21 06-09-12 KJ	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	DC	DOCUMENT CONTROL
-----	----	------------------



K-8 07.05.31

Comment: Photocopy bluefile & type labels per PPPD350-748-101	CHG001
---	--------

2.0	32155A	X-TUBE AS 350/355 HI FWD UNDER REVIEW
-----	--------	---------------------------------------



Comment: Sub-Component X-TUBE AS 350/355 HI FWD
D350-748-141 B <u>32155A</u>

7/10/20 SO

3.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------



Comment: PACKAGING RESOURCE #1
Pick Packing Kit

4.0	D35001	350 SADDLE
-----	--------	------------



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
350 SADDLE
Batch: <u>1331934</u>

59

5.0	D35011	BUSHING
-----	--------	---------



Comment: Qty.: 16.0000 Each(s)/Unit Total : 16.0000 Each(s)
BUSHING
Batch: <u>1331935</u>

7-11-20 SO

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 5/3/2007 11:24:35 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350/355 AS X-TUBE FWD UNDER REVIEW

Job Number: 32155

Part Number: D350748101

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

6.0	AN46A	Bolt
-----	-------	------



Comment: Qty.: 16.0000 Each(s)/Unit Total : 16.0000 Each(s)
Bolt
Batch: M1054322 *SP*

7.0	AN441A	bolt
-----	--------	------



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)
bolt
Batch: M105940 *SP*

8.0	AN532A	Bolt
-----	--------	------



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
Bolt
Batch: M101936 *SP*

9.0	AN960JD416	Washer
-----	------------	--------



Comment: Qty.: 32.0000 Each(s)/Unit Total : 32.0000 Each(s)
Washer
Batch: M105426 *SP*

10.0	AN960JD516	Washer
------	------------	--------



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)
Washer
Batch: M104156 *SP*

11.0	MS21042L4	Nut
------	-----------	-----



Comment: Qty.: 24.0000 Each(s)/Unit Total : 24.0000 Each(s)
Nut
Batch: M105054 *SP*

12.0	MS21042L5	Nut
------	-----------	-----



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
Nut
Batch: M105436 *8-11-20 SP*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 5/3/2007 11:24:36 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350/355 AS X-TUBE FWD UNDER REVIEW

Job Number: 32155

Part Number: D350748101

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

5 7/11/20

14.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D350-748-101

Location: _____

PPP Rev: _____

7/11/20 SD (1x)

15.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

7/11/20 (1)

Job Completion



6 7/11/20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Customer	: CU-DAR001	Dart Helicopters Services	Drawing Name	: X-TUBE AS 350/355 HI FWD UNDER REVIEW
Job Number	: 32155A			
Estimate Number	: 12484			
P.O. Number	: N/A		Part Number	: D350748141
This Issue	: 5/3/2007	S.O. No. : N/A	Drawing Number	: D350-748-141 <i>UR</i>
Prsht Rev.	: NC		Project Number	: N/A
First Issue	: N/A	Type : LANDING GEAR	Drawing Revision	: <i>CD</i>
Previous Run	: 32154A		Material	: N/A
Written By	: <i>[Signature]</i>		Due Date	: 6/10/2007
Checked & Approved By	: <i>[Signature]</i>		Qty:	1 Um: Each
Comment	: Est Rev: A New Issue 06-07-05 JLM			
	: Est Rev: B Update cadplate process 06-09-12 KJ			

1
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11
 12
 13
 14
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25
 26
 27
 28
 29
 30
 31
 32
 33
 34
 35
 36
 37
 38
 39
 40
 41
 42
 43
 44
 45
 46
 47
 48
 49
 50
 51
 52
 53
 54
 55
 56
 57
 58
 59
 60
 61
 62
 63
 64
 65
 66
 67
 68
 69
 70
 71
 72
 73
 74
 75
 76
 77
 78
 79
 80
 81
 82
 83
 84
 85
 86
 87
 88
 89
 90
 91
 92
 93
 94
 95
 96
 97
 98
 99
 100
 101
 102
 103
 104
 105
 106
 107
 108
 109
 110
 111
 112
 113
 114
 115
 116
 117
 118
 119
 120
 121
 122
 123
 124
 125
 126
 127
 128
 129
 130
 131
 132
 133
 134
 135
 136
 137
 138
 139
 140
 141
 142
 143
 144
 145
 146
 147
 148
 149
 150
 151
 152
 153
 154
 155
 156
 157
 158
 159
 160
 161
 162
 163
 164
 165
 166
 167
 168
 169
 170
 171
 172
 173
 174
 175
 176
 177
 178
 179
 180
 181
 182
 183
 184
 185
 186
 187
 188
 189
 190
 191
 192
 193
 194
 195
 196
 197
 198
 199
 200
 201
 202
 203
 204
 205
 206
 207
 208
 209
 210
 211
 212
 213
 214
 215
 216
 217
 218
 219
 220
 221
 222
 223
 224
 225
 226
 227
 228
 229
 230
 231
 232
 233
 234
 235
 236
 237
 238
 239
 240
 241
 242
 243
 244
 245
 246
 247
 248
 249
 250
 251
 252
 253
 254
 255
 256
 257
 258
 259
 260
 261
 262
 263
 264
 265
 266
 267
 268
 269
 270
 271
 272
 273
 274
 275
 276
 277
 278
 279
 280
 281
 282
 283
 284
 285
 286
 287
 288
 289
 290
 291
 292
 293
 294
 295
 296
 297
 298
 299
 300
 301
 302
 303
 304
 305
 306
 307
 308
 309
 310
 311
 312
 313
 314
 315
 316
 317
 318
 319
 320
 321
 322
 323
 324
 325
 326
 327
 328
 329
 330
 331
 332
 333
 334
 335
 336
 337
 338
 339
 340
 341
 342
 343
 344
 345
 346
 347
 348
 349
 350
 351
 352
 353
 354
 355
 356
 357
 358
 359
 360
 361
 362
 363
 364
 365
 366
 367
 368
 369
 370
 371
 372
 373
 374
 375
 376
 377
 378
 379
 380
 381
 382
 383
 384
 385
 386
 387
 388
 389
 390
 391
 392
 393
 394
 395
 396
 397
 398
 399
 400
 401
 402
 403
 404
 405
 406
 407
 408
 409
 410
 411
 412
 413
 414
 415
 416
 417
 418
 419
 420
 421
 422
 423
 424
 425
 426
 427
 428
 429
 430
 431
 432
 433
 434
 435
 436
 437
 438
 439
 440
 441
 442
 443
 444
 445
 446
 447
 448
 449
 450
 451
 452
 453
 454
 455
 456
 457
 458
 459
 460
 461
 462
 463
 464
 465
 466
 467
 468
 469
 470
 471
 472
 473
 474
 475
 476
 477
 478
 479
 480
 481
 482
 483
 484
 485
 486
 487
 488
 489
 490
 491
 492
 493
 494
 495
 496
 497
 498
 499
 500
 501
 502
 503
 504
 505
 506
 507
 508
 509
 510
 511
 512
 513
 514
 515
 516
 517
 518
 519
 520
 521
 522
 523
 524
 525

[illegible][illegible]

N/A

[illegible]

UG 07.07.15

①

[illegible]

Author's address: Department of Psychology, University of California, San Diego, La Jolla, CA 92037, USA.
E-mail: jacob@ucsd.edu

S.F 07/02/14

1. **Author(s):** [REDACTED]
 2. **Title:** [REDACTED]
 3. **Journal:** [REDACTED]
 4. **Volume:** [REDACTED]
 5. **Issue:** [REDACTED]
 6. **Pages:** [REDACTED]
 7. **Year:** [REDACTED]
 8. **DOI:** [REDACTED]
 9. **URL:** [REDACTED]
 10. **Abstract:** [REDACTED]
 11. **Keywords:** [REDACTED]
 12. **Notes:** [REDACTED]
 13. **References:** [REDACTED]
 14. **Comments:** [REDACTED]
 15. **Other:** [REDACTED]

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

2. The second step is to define the objectives and goals of the project. This involves determining what you want to achieve and how you will measure success.

3. The third step is to develop a plan or strategy. This involves identifying the steps you need to take to achieve your goals and determining the resources you will need.

4. The fourth step is to implement the plan. This involves putting your strategy into action and monitoring progress.

5. The fifth step is to evaluate the results. This involves assessing the outcomes of your project and determining whether you have achieved your goals.

6. The sixth step is to reflect on the process. This involves thinking about what you have learned and how you can improve your approach in the future.

7. The seventh step is to communicate the results. This involves sharing your findings with others and providing feedback.

8. The eighth step is to document the process. This involves keeping a record of what you have done and how you have done it.

9. The ninth step is to review the process. This involves looking back at what you have done and thinking about how you can improve it.

10. The tenth step is to celebrate success. This involves acknowledging the achievements of your team and celebrating the completion of the project.

8707/07/64

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 5/3/2007 11:24:53 AM

User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: X-TUBE AS 350/355 HI FWD UNDER REVIEW

Job Number: 32155A

Part Number: D350748141

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

MORI SEIKI

MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

1-Turn second side as per Folio FA648

2-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D350-748-141.

3-Scribe Part & Batch as per Dwg D350-748-141

8.5 07/07/14

6.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

8.5 07/07/14

7.0

QC8

SECOND CHECK



Comment: SECOND CHECK

SA 01-01-15

8.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Remove all Machining Marks

JB 7-7-26

9.0

OUTSIDE SERV.10

OUTSIDE SERVICES -LG



Comment: Sub-Contracting OUTSIDE SERVICES

Issue P/O: 4289

Heat Treat to min 180 KSI As per Dwg D350-748-141

(MIL-T-6736 OR AMS 2759-1C)

Sand Blast tube after Heat Treat

Possible Supplier: Vac Aero

Ensure Certificate of Conformity is attached

P/SU 7-8-02

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure certificate of conformaty is attached

CS 07/08/24 @

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 5/3/2007 11:24:53 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: X-TUBE AS 350/355 HI FWD UNDER REVIEW

Job Number: 32155A

Part Number: D350748141

Job Number:



Seq. #:

Machine Or Operation:

Description :

11.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

7-9-10 @

12.0

BENDING

BENDING MACHINE



Comment: BENDING MACHINE

Bend tube as per Dwg D350-748-141 using CNC bender program D350F and Folio FT *EL 7-9-11*

13.0

QC15

DIMENSIONAL CHECK OF X-TUBES



Comment: DIMENSIONAL CHECK OF X-TUBES

7-9-11 @

14.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill Tube as per Dwg D350-748-141 Using DT8876 Drill Jigs,
Set-up drill table as per QSI 010

2-Deburr

3-Engrave Part # and Batch # as per Dwg D350-748-141

4-Remove all marks from tube within limits of D350-748-141

5- Apply a light coat of LPS3 on the interior of tube

Batch: *M104161*

EL 7-9-28

AWM 07-10-03

EL 7-9-12

15.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

checked hole for alignment

G 07/06/04

16.0

OUTSIDE SERV.10

OUTSIDE SERVICES -LG



Comment: Sub-Contracting OUTSIDE SERVICES

Issue P/O: *4787*

Stress relief at 375° for 5 hours

Magnetic Particle Inspect per ASTM E1444

Cadium Plate per AMS-QQ-P-416B, Class 1, Type 2

Embrittle relief at 375° for 8 hours, Chromate Treat

Possible Supplier: Southwest United Industries

Ensure Certificate of Conformity is attached

0207/10/11

①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 5/3/2007 11:24:53 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001: Dart Helicopters Services

Drawing Name: X-TUBE AS 350/355 HI FWD UNDER REVIEW

Job Number: 32155A

Part Number: D350748141

Job Number:



Seq. #:

Machine Or Operation:

Description :

17.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure certificate of conformity is attached

2/11/06 (1x) SP

18.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SP 07/11/07

19.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Prime inside crosstube as per QSI 005 4.2

2-Prime Outside of Tube as per Dart QSI 005 4.2

> ml 07/11/07
ml 07/11/14

(1)

20.0

QC14

INSPECT SPRAY PAINT



Comment: Inspect Spray Paint

Then, Wrap in plastic bag to protect from scratches

2-11-15 @

21.0

D35021

SUPPORT



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

SUPPORT

Batch: 32205

ml 07/11/15

22.0

D2856400

Abrasion Strip



Comment: Qty.: 1.2401 f(s)/Unit Total: 1.2401 f(s)

Abrasion Strip 7.10" long x2

Batch: 34642

ml 07/11/15

23.0

ALS41032225

Insert



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Insert

Batch: 100621

ml 07/11/15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: D Date: 07/11/13

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
07/11/13	19.0	Run in primer (Human Error)	<u>AS/14/2</u>	sand with 320 and re-spray per 0051005	<u>MM</u> 07/11/14	<u>07/11/13</u>	<u>AS/14/2</u>	<u>07/11/13</u>

NOTE: Date & initial all entries

Date: Thursday, 5/3/2007 11:24:53 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: X-TUBE AS 350/355 HI FWD UNDER REVIEW

Job Number: 32155A

Part Number: D350748141

Job Number:



Seq. #:

Machine Or Operation:

Description :

24.0

AN960JD10

Washer



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Washer

Batch: 105442

ml 07 11 15

25.0

MS2192020

Clamp (per MIL-DTL-8783C)



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Clamp (per MIL-DTL-8783C)

Batch: 102787

ml 07 11 15

26.0

MS27039110

Screw



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Screw

Batch: 18836

ml 07 11 15

27.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Install Ground wire Insert, then insert screw and washer

2-Install Abrasion strips as per Dwg D350-748-141 & QSI 035.

3-Install supports Using Dt8876 as per Dwg D350-748-141, Torque to 60-80 IN-LBS

ml 07 11 15

28.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

29.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D350-748-241

Location:

PPP Rev:

B

7/11/20

sq

(A)

32155

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: D Date: 07/11/20
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 5/3/2007 11:24:53 AM

User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: X-TUBE AS 350/355 HI FWD UNDER REVIEW

Job Number: 32155A

Part Number: D350748141

Job Number:



Seq. #:

Machine Or Operation:

Description :

30.0

QC21

FINAL INSPECTION/W/O RELEASE



①

Comment: FINAL INSPECTION/W/O RELEASE

Done

Job Completion



u 07.16.20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

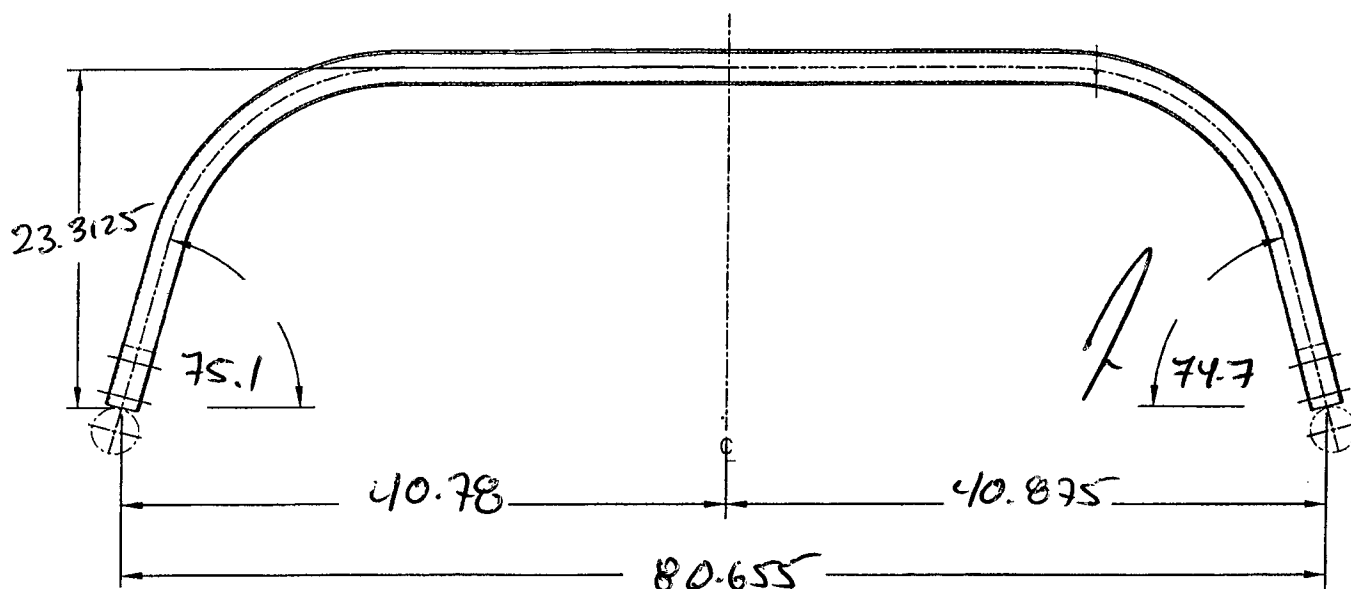
QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	32155A
Description: Crosstube High Fwd (AS350/355)		Part Number:	D350-748-101
Inspection Dwg: D350-748-141 Rev: D		Page 1 of 1	

Required Dimension	Min	Max
Height	23.13	23.37
1/2 Span	40.78	41.02
Angle	75	77
Total Span	81.56	82.04



Comments

QC15 Inspection	<i>[Signature]</i> 0709.11
Date	

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM <i>[Signature]</i>	<i>[Signature]</i>

DART AEROSPACE LTD	Work Order: 32155A
Description: Crosstube Assembly (AS350/355 High Fwd)	Part Number: D350-748-141
Inspection Dwg: D350-748-141 Rev: 02	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	2.240	+0.005/-0.000	2.242			
	2.180	+0.005/-0.000	2.182			
	2.180	+0.005/-0.000	2.182			
	2.237	+0.005/-0.000	2.239			
	2.272	+0.005/-0.000	2.274			
	2.306	+0.005/-0.000	2.308			
	2.339	+0.005/-0.000	2.341			
	2.339	+0.005/-0.000	2.341			
	0.062	+/-0.010	.062			
	4.26	+/-0.030	4.260			
	R0.063	+/-0.010	.063			
	R0.50	+/-0.030	.500			
SIDE B	2.240	+0.005/-0.000	2.242			
	2.180	+0.005/-0.000	2.182			
	2.180	+0.005/-0.000	2.182			
	2.237	+0.005/-0.000	2.239			
	2.272	+0.005/-0.000	2.274			
	2.306	+0.005/-0.000	2.308			
	2.339	+0.005/-0.000	2.341			
	2.339	+0.005/-0.000	2.341			
	0.062	+/-0.010	.062			
	4.26	+/-0.030	4.26			
	R0.063	+/-0.010	.063			
	R0.50	+/-0.030	.500			
	110.27	+/-0.060				

Measured by: J. P.	Audited by: SA	Prototype Approval:	N/A
Date: 07/01/14	Date: 07-01-15	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.11.09	New Issue (P/O D350-748-101)	KJ/JLM	E



DESIGN <i>qp</i>	DRAWN BY <i>qp</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>///</i>	APPROVED <i>///</i>	DRAWING NO. D350-748-141	REV. D SHEET 1 OF 3
DATE 06.10.31		TITLE CROSSTUBE (AS 350/355 HI FWD) SCALE NTS	
A	06.03.31	NEW ISSUE	
B	06.06.30	ADD D6017-115 & PRIME AND PAINT	
C	06.08.14	ADD CAD PLATING	
D	06.10.31	MAG. PARTICLE AND CAD PLATE AS MFD.	

RELEASED

06.10.31 *///*

QTY	P/N	DESCRIPTION
X	D350-748-141	CROSSTUBE ASSEMBLY (AS 350/355 HI FWD)
1	D6017-115	CROSSTUBE (OR D6015-125)
2	D3502-1	SUPPORT
2	D2856-400-710	ABRASION STRIP
1	AELS-1032-225	INSERT
1	AN960JD10	WASHER
2	MS21920-20	CLAMP (PER DART SPEC. M-MS21920-20)
1	MS27039-1-10	SCREW

D350-748-141 CROSSTUBE:

- 1) MATERIAL: MANUFACTURED FROM D6017-115 OR D6015-125
FINISHED LENGTH = 110.27 ± 0.06
- 2) MACHINE PER MACHINING DETAIL ON PAGE 3. BLEND OUT ALL EDGES FROM MACHINING LONGITUDINALLY, TRANSITIONS SHOULD BE SMOOTH. NOTE: ALL HOLES ARE DRILLED AFTER BENDING.
- 3) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 4) BEND PROGRESSIVELY WITH A MINIMUM OF 7 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 5) HEAT TREAT TO MIN. 180 KSI PER MIL-T-6736 OR AMS 2759-1C AFTER TURNING
- 6) FINISH: MAGNETIC PARTICLE INSPECT PER DART QSI 038 4.2
CADMIUM PLATE PER AMS-QQ-P-416B, CLASS 1, TYPE II
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 7) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. WHEN DRILLING HOLES EXTREME CARE MUST BE TAKEN AND CAREFUL DEBURRING PERFORMED TO ENSURE A CLEAN HOLE WITH NO CRACKING/CHIPPING/GROOVES.
- 8) INSTALL D2856-400-710 ABRASION STRIP WITH A GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D3502-1 SUPPORT, PER QSI 035.
- 9) TORQUE MS21920-20 CLAMPS 60 TO 80 IN-LB
- 10) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 11) ALL DIMENSIONS ARE IN INCHES
- 12) PART IS SYMMETRIC ABOUT CENTERLINE EXCEPT FOR $\varnothing 0.297$ HOLE.

UNDER REVIEW

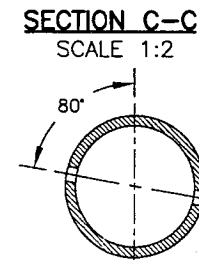
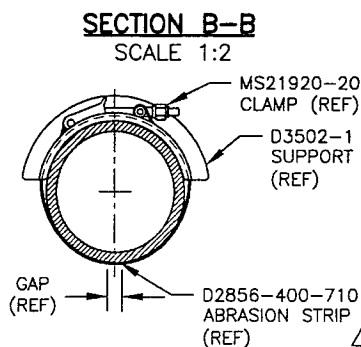
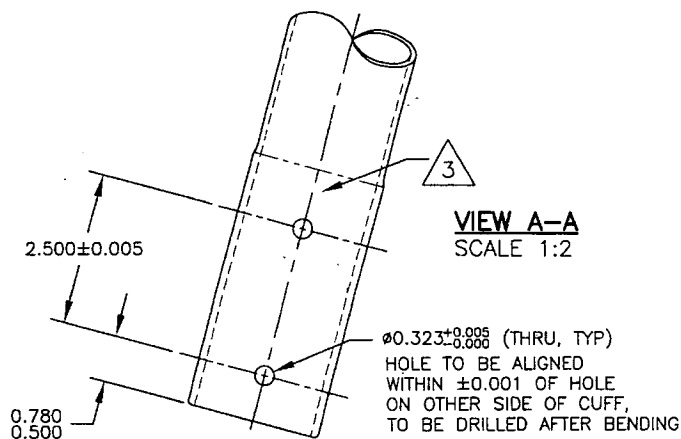
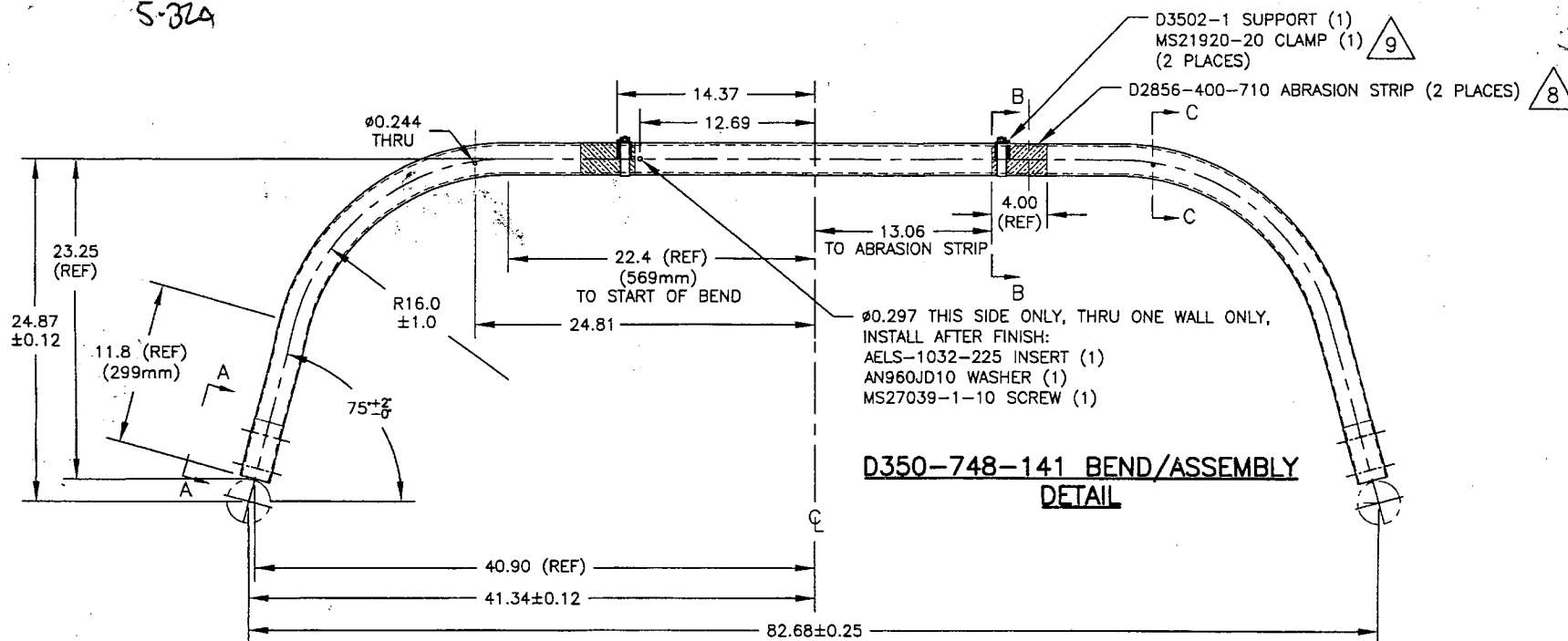
07.02.16/19
CUFF BEING REDUCED

OK *qp* 07.03.07

Copyright © 2006 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

AN 4-6A
4-41a
5-32A

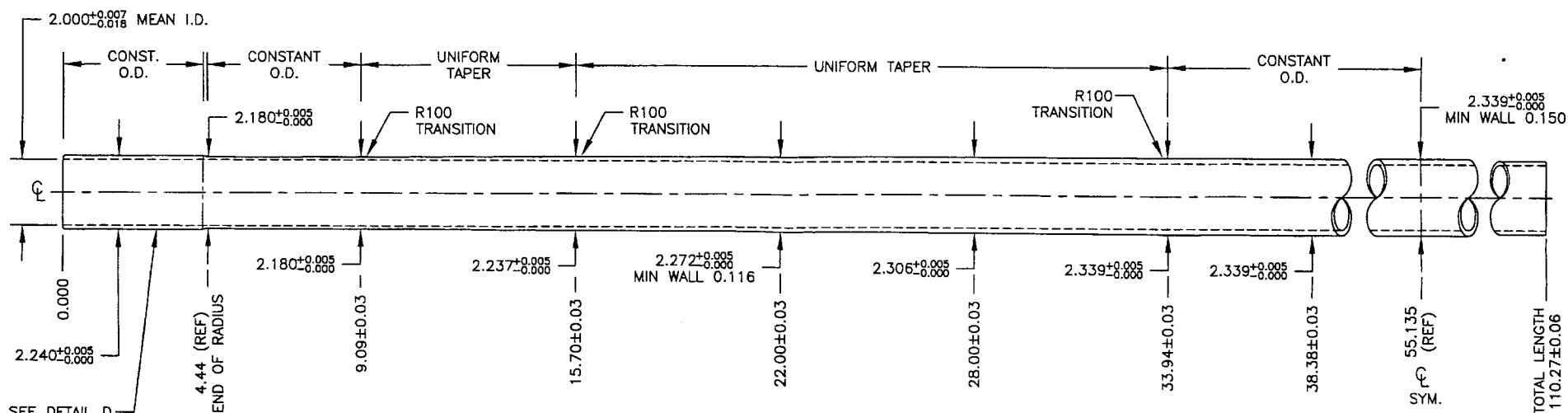


OK 07.03.07
UNDER REVIEW
07.03.16
RELEASED
06.10.31

NO. 2155A
WORK ORDER
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
SHOP COPY
RETURN TO
ENGINEERING

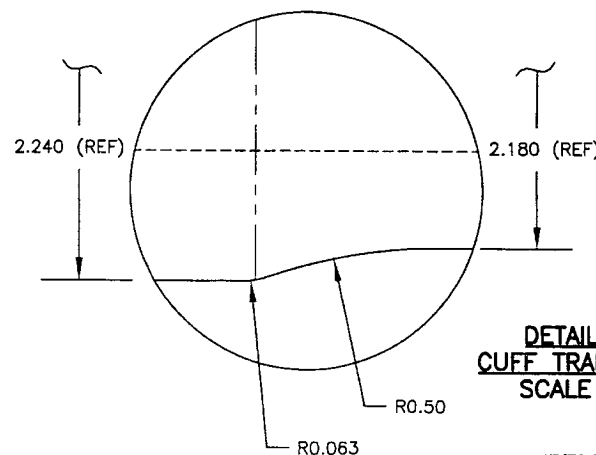
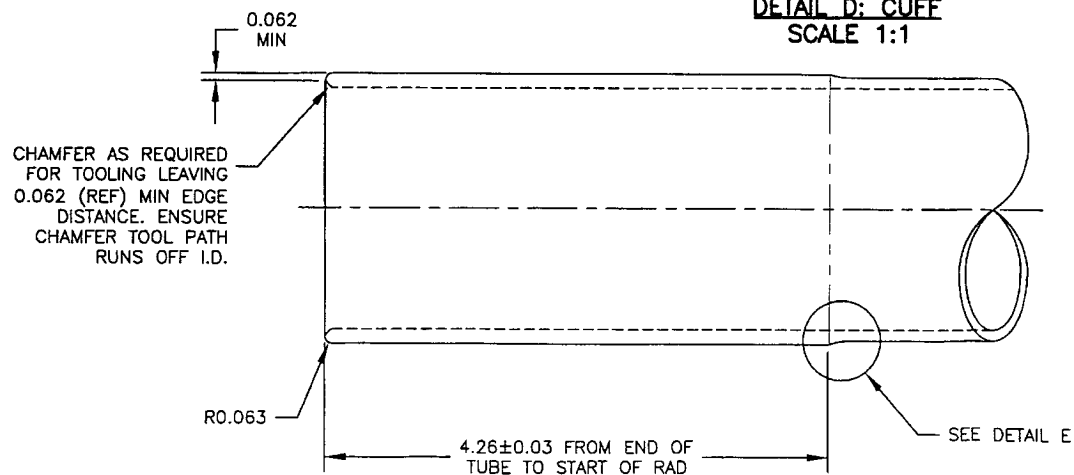
COPYRIGHT © 2006 BY DART AEROSPACE LTD.		DESIGN	90	DRAWN BY	90	DART	DART AEROSPACE LTD.
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR SCORID OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		CHECKED	#	APPROVED	#	DRAWING NO.	REV.
						D350-748-141	SHEET 2 OF
		DATE	06.10.31		TITLE	CROSSTUBE (AS 350/355 HI FWD)	
							1:

REV. D
SHEET 2 OF 3



D350-748-141 MACHINING DETAIL

DETAIL D: CUFF SCALE 1:1



DETAIL E: CUFF TRANSITION SCALE 9:1

RELEASED
06.10.31

OK'd 02.03.07
UNDER REVIEW
07.07.16

COPYRIGHT © 2006 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DESIGN 90	DRAWN BY 90	DART DART AEROSPACE LTD. HAMMERSBURY, ONTARIO, CANADA	REV. 0
CHECKED #	APPROVED #	DRAWING NO. D350-748-141	SHEET 3 OF 3
DATE 06.10.31	TITLE CROSSTUBE (AS 350/355 HI FWD)	SCALE 1:3	

NO. 30157A
WORK ORDER
UNCONTROLLED COPY
ENGINEERING
SUBJECT TO AMENDMENT
WITHOUT NOTICE
SHOP COPY
RETURN TO
ENGINEERING



VAC AERO
INTERNATIONAL INC.

PACKING SLIP

OAK 89868-1



HEAD OFFICE
1371 SHEERS ROAD, OAKVILLE, ONTARIO
CANADA L6L 2X5
TEL: (905) 827-4171 FAX: (905) 827-7489



QUEBEC DIVISION
7450 RUE VÉRITÉ STREET, ST. LAURENT, QUÉBEC
CANADA H4S 1C5
TEL: (514) 334-4240 FAX: (514) 334-6269

GST No.: R105468102

08/22/2007

MM / DD / YYYY

PAGE: 1

1DAR01

BILL TO: DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY, ON

SHIP TO: DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY, ON

K6A 1K7

K6A 1K7

DATE SHIPPED	SHIP VIA	F.O.B.
08/22/2007		ORIGIN
CUSTOMER P/O No.	JOB No.	TERMS
00004289		COD

LN	PART NO	DESCRIPTION	UOM	QTY ORDERED	QTY SHIPPED	B/O QTY
01	D350-718	-141/241	EA	10	10	0
		Process Specifications: Procedure: 4353 HEAT TREATED TO 180 KSI PER AMS 2759-1C 100% HARDNESS CHECKED AS PER ASTM E-18 HRC 40-45 MATERIAL: 4130 SAND BLASTED 1 PIECE P/N D350748141 B32157, 1 PIECE P/N D350748241 B32161 1 PIECE P/N D350748141 B32153, 1 PIECE P/N D350748241 B32160 1 PIECE P/N D350748141 B32155, 1 PIECE P/N D350748241 B32159 1 PIECE P/N D350748141 B32154, 1 PIECE P/N D350748241 B32162 1 PIECE P/N D350748141 B32156, 1 PIECE P/N D350748241 B32158				
02	MC	MINIMUM CHARGE 375 LBS @ \$2.26/LB		1	1	0
03	GB	GRIT BLASTING		1	1	0

No claims for shortage in weight or count will be entertained, unless presented within 5 working days after receipt of materials by customer.



VACUUM BRAZING · HEAT TREATING · SPECIAL PROCESSING · FURNACE EQUIPMENT
TURBINE COMPONENT OVERHAUL · PLASMA AND OTHER COATINGS





VAC AERO
INTERNATIONAL INC.

RELEASE NOT

GST No.: R105468102

OAK 89868-1



HEAD OFFICE
1171 SPEERS ROAD, OAKVILLE, ONTARIO
CANADA L6L 2X5
TEL: (905) 827-4171 FAX: (905) 827-7489



2009 WYECROFT ROAD, UNIT B
OAKVILLE, ONTARIO
CANADA L6L 6J4
TEL: (905) 827-7377 FAX: (905) 827-1380



QUEBEC DIVISION
7450 RUE VERITÉ STREET, ST. LAURENT, QUÉBEC
CANADA H4S 1C5
TEL: (514) 334-4240 FAX: (514) 334-6269

08/22/2007

MM/DD/YYYY

PAGE: 1

BILL TO: 1DAR01
DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY, ON

SHIP TO: DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY, ON

K6A 1K7

K6A 1K7

DATE SHIPPED	SHIP VIA	F.O.B.
08/22/2007		
CUSTOMER P/O No.	JOB No.	ORIGIN
00004289		
		TERMS
		COD

PART No.	DESCRIPTION	UOM	QTY ORD	QTY SHPD	TEST RESULTS
D350-748	-141/241	EA	10	10	
<p>Process Specifications: Procedure: 4353 HEAT TREATED TO 180 KSI PER AMS 2759-10 100% HARDNESS CHECKED AS PER ASTM E-18 HRC 40-45 MATERIAL: 4130 SAND BLASTED</p>					
<p>1 PIECE P/N D350748141 B32157, 1 PIECE P/N D350748241 B32161 1 PIECE P/N D350748141 B32153, 1 PIECE P/N D350748241 B32160 1 PIECE P/N D350748141 B32155, 1 PIECE P/N D350748241 B32159 1 PIECE P/N D350748141 B32154, 1 PIECE P/N D350748241 B32162 1 PIECE P/N D350748141 B32156, 1 PIECE P/N D350748241 B32158</p>					

100% HARDNESS TESTED

10 PS.

42/43 HRC



I hereby certify that the material covered by this release note has been inspected and tested and conforms to all specifications relevant thereto in accordance with the conditions of the contract / or purchase order.

ON BEHALF OF VAC AERO INTERNATIONAL INC.

Laura Robinson
Authorized Q.C. Inspector



VACUUM BRAZING - HEAT TREATING - SPECIAL PROCESSING - FURNACE EQUIPMENT
TURBINE COMPONENT OVERHAUL - PLASMA AND OTHER COATINGS



HEAT TREATING

**CERTIFICATE OF
CONFORMANCE**

**CADORATH PLATING CO. LTD.
2150 LOGAN AVENUE
WINNIPEG, MANITOBA R2J-0J1**

DATE: Oct-31-2007

CONSIGNED TO: Dart Aerospace Ltd.
1270 Aberdeen St.
Hawksbury, ON K6A 1K7

W/O #: 70675
INVOICE #: 36541

**CONTRACT OR
PURCHASE ORDER #** PO4787

DESCRIPTION: SKID

QTY 4

P/N # D350748141

S/N # B3215

**CADMIUM PLATE IAW AMS-QQ-P-416 REV. B TYPE 2 CLASS 1. MPI
IAW ASTM-E-1444. BAKE HEAT CHART #8407 & #8431.**

CERTIFICATE: I certify that the items indicated here on have
been inspected and tested and conform to all specifications
and requirements detailed on the contract or purchase order.

Approved Inspector:

William Maruszynski





VAC AERO
INTERNATIONAL INC.

PACKING SLIP

OAK 89868-1



HEAD OFFICE
1371 SHEERS ROAD, OAKVILLE, ONTARIO
CANADA L6L 2X5
TEL: (905) 827-4171 FAX: (905) 827-7489



QUEBEC DIVISION
7450 RUE VÉRITÉ STREET, ST. LAURENT, QUÉBEC
CANADA H4S 1C5
TEL: (514) 334-4240 FAX: (514) 334-6269

GST No.: R105468102

08/22/2007

MM/DD/YYYY

PAGE: 1

BILL TO: 1DAR01
DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY, ON

SHIP TO: DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY, ON

K6A 1K7

K6A 1K7

DATE SHIPPED	SHIP VIA	F.O.B.
08/22/2007		ORIGIN
CUSTOMER P/O No.	JOB No.	TERMS
00004289		COD

LN	PART NO	DESCRIPTION	UOM	QTY ORDERED	QTY SHIPPED	B/O QTY
01	D350-718	-141/241	EA	10	10	0
		Process Specifications: Procedure: 4353 HEAT TRIATED TO 180 KSI PER AMS 2759-1C 100% HAIDNESS CHECKED AS PER ASTM E-18 HRC 40-45 MATERIAL: 4130 SAND BLASTED 1 PIECE P/N D350748141 B32157, 1 PIECE P/N D350748241 B32161 1 PIECE P/N D350748141 B32153, 1 PIECE P/N D350748241 B32160 1 PIECE P/N D350748141 B32155, 1 PIECE P/N D350748241 B32159 1 PIECE P/N D350748141 B32154, 1 PIECE P/N D350748241 B32162 1 PIECE P/N D350748141 B32156, 1 PIECE P/N D350748241 B32158				
02	MC	MINIMUM CHARGE 375 LBS @ \$2.26/LB		1	1	0
03	GB	GRIT BLASTING		1	1	0

No claims for shortage in weight or count will be entertained, unless presented within 5 working days after receipt of materials by customer.



VACUUM BRAZING - HEAT TREATING - SPECIAL PROCESSING - FURNACE EQUIPMENT
TURBINE COMPONENT OVERHAUL - PLASMA AND OTHER COATINGS





VAC AERO
INTERNATIONAL INC.

RELEASE NOT

GST No.: R105468102

OAK 89868-1

☒ HEAD OFFICE
1371 SPEERS ROAD, OAKVILLE, ONTARIO
CANADA L6L 2X5
TEL: (905) 827-4171 FAX: (905) 827-7489

☐ 2009 WYECROFT ROAD, UNIT B
OAKVILLE, ONTARIO
CANADA L6L 6J4
TEL: (905) 827-7377 FAX: (905) 827-1380

☐ QUEBEC DIVISION
7450 RUE VÉRITÉ STREET, ST. LAURENT, QUÉBEC
CANADA H4S 1C5
TEL: (514) 334-4240 FAX: (514) 334-6269

08/22/2007

MM / DD / YYYY

PAGE: 1

BILL TO: 1DAR01
DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY, ON

SHIP TO: DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY, ON

K6A 1K7

K6A 1K7

DATE SHIPPED	SHIP VIA	F.O.B.
08/22/2007		
CUSTOMER P/O No.	JOB No.	ORIGIN
00004289		
		TERMS
		COD

PART No.	DESCRIPTION	UOM	QTY ORD	QTY SHPD	TEST RESULTS
----------	-------------	-----	------------	-------------	--------------

D350-748

-141/241

EA 10 10

Process Specifications: Procedure: 4353

HEAT TREATED TO 180 KSI PER AMS 2759-1C

100% HARDNESS CHECKED AS PER ASTM E-18

HRC 40-45

MATERIAL: 4130 ✓

SAND BLASTED

100% HARDNESS TESTED

10 PCS.

42/43 HRC



1 PIECE P/N D350748141 B32157, 1 PIECE P/N D350748241 B32161
1 PIECE P/N D350748141 B32153, 1 PIECE P/N D350748241 B32160
1 PIECE P/N D350748141 B32155, 1 PIECE P/N D350748241 B32159
1 PIECE P/N D350748141 B32154, 1 PIECE P/N D350748241 B32162
1 PIECE P/N D350748141 B32156, 1 PIECE P/N D350748241 B32158

I hereby certify that the material covered by this release note has been inspected and tested and conforms to all specifications relevant thereto in accordance with the conditions of the contract / or purchase order.

ON BEHALF OF VAC AERO INTERNATIONAL INC.

Chau Robinson
Authorized Q.C. Inspector



VACUUM BRAZING · HEAT TREATING · SPECIAL PROCESSING · FURNACE EQUIPMENT
TURBINE COMPONENT OVERHAUL · PLASMA AND OTHER COATINGS

